ATTACHMENT A

Summary of Comments on the Proposed Rules

I. Introduction

In June 2001, the Natural Resources Board authorized public hearings on proposed rules to reduce mercury emissions to reduce atmospheric deposition of mercury in chapter NR 446, Wis. Adm. Code. Five public hearings were held during September and October 2001. Public comments received at public hearings and during the comment period were extensive. At the five public hearings over 100 individuals gave statements. In addition, during the comment period over 60 detailed written comments were received from businesses, electric utilities, associations and organizations. Wisconsin citizens supporting rules submitted more than 2000 cards, letters and emails.

All comments were reviewed. Included in this document is a summary of significant comments and the department staff response. This comment summary is organized into three sections:

- Significant Comments and Issues Evaluated by the Mercury Citizen Advisory Committee
- Comments on Alternatives Offered for Public Comment
- Legislative Council Clearinghouse Comments

Significant Comments and Issues Evaluated by the Mercury Citizen Advisory Committee

At the June 2001 Natural Resources Board meeting when public hearings were authorized on proposed rules, Secretary Bazzell requested that the Bureau of Air Management establish a Mercury Citizen Advisory Committee to review public comments received at hearings and make recommendations for addressing significant areas of concern and controversy. The committee that was established included stakeholders representing environmental, industrial, utility, and tribal interests. During the course of their work, the committee identified and discussed numerous issues relating to the proposed rules. The committee's final report was provided to the Secretary and members of the Natural Resources Board in September 2002. Below is an overview of significant issues, a selection of comments received on each issue and a staff response.

A. Determining Baseline Mercury Emissions

ISSUE: How should a mercury emission baseline be established for utility units or other mercury emitting sources that may be affected by requirements to cap and reduce mercury emissions?

The methodology in the proposed rules for establishing utility baseline emissions relies on historical fuel use for 1998, 1999, and 2000. This methodology may not be the most equitable or reliable approach for affected sources. Key concerns were the availability and precision of data on past fuel usage, and lack of accounting for any coal, physical process, or pollution control changes since 1998 that resulted in mercury emission reductions. Committee members acknowledged that obtaining accurate historical information might be difficult and encouraged that the baseline determination approach be reconsidered.

SELECT COMMENTS:

"The proposed methodology for determining a historic emission baseline is problematic. It does not account for any coal or pollution control changes since 1998, as well as a number of other inaccuracies. Alternatively, a baseline that is determined using total annual mercury in fuel into the boiler would avoid

the retroactive application of emission factors and provide accurate data on a going-forward basis. The mercury content in the coal, coal usage, and the removal efficiency of the pollution control equipment would be based on the latest coal data and stack test results to establish the current year baseline. Requirements for sampling methods, analytical techniques and procedures, and stack reference test methods would be defined, up front, in rulemaking." – WE Energies

RESPONSE: The methodology for determining baseline mercury emissions has been substantially revised. Significantly, mercury emissions determined from fuel mercury content instead of stack emissions is now the starting point for the reduction requirements facing major utilities. Also, data to establish baseline mercury emissions will be from more recent years than initially proposed. Measurements from the year after the rules are promulgated will determine fuel mercury content. Fuel use will be the average of fuel consumption of three years, 2002, 2003 and 2004. This approach minimizes reliance on historical information and sets a uniform starting point for mercury reductions eliminating any penalty for mercury emission reductions already being achieved.

Only major utilities are required to set baseline emissions. Other significant mercury sources, those with mercury emissions that are 10 pounds annually or greater, do not need to determine baseline emissions. However, the rules will still set uniform procedures for determining annual emissions from significant mercury sources.

B. Federal Mercury Initiatives

ISSUE: What is the relationship between a Wisconsin regulation and pending federal regulations that will require mercury emission reductions from electric utility boilers and industrial boilers?

In general utility stakeholders are opposed to state mercury regulations that establish mercury reduction requirements greater than the 40% commitment they have made. These stakeholders favor taking initial action but do not favor a state regulation that may result in greater reductions sooner than a federal law or federal regulation would require. There is also concern that differences between state and federal requirements may occur that cannot be reconciled. This is further rationale for state mercury rules that should only require a limited initial mercury reduction.

Industry stakeholders believe that any state action is inappropriate and Wisconsin should wait for federal action.

SELECT COMMENTS:

"A national approach to mercury control, while still not addressing global mercury concerns, would be much more likely to result in meaningful environmental improvements than a Wisconsin-only rule." – Wisconsin Paper Council

"Wisconsin Electric has characterized the proposed state rules as a bridge between the current state of controls for utility boilers (no federal or state-mandated controls) and pending federal rules applicable to coal –fired generating units. State-only rules are an assurance that some directionally-correct action is being taken by Wisconsin, even if there turns out to be unforeseen delays at the federal level" – WE Energies

"Wisconsin must send a strong message to other states and the federal government about addressing the largest source of mercury pollution that we have control over and by acting first we can positively influence federal mercury regulations, the result being a "Wisconsin-friendly" regulation." – Wisconsin's Environmental Decade

RESPONSE: We believe it is in the state's interest to establish regulations that define the amount of mercury emission reductions that are technically achievable on a schedule appropriate for the state's major utilities. At this time, federal requirements for reduction of mercury emissions do not apply to existing coal-fired electric utility boilers. It is true that there is a pending federal MACT (Maximum Achievable Control Technology) regulation in the Clean Air Act under Section 112, Hazardous Air Pollutants. Also, in the U.S. Congress, several bills have been introduced in the current session, including the President's "Clear Skies" proposal. These bills require electric utilities to pursue a multi-pollutant reduction approach for the principal air pollutants emitted by fossil fuel combustion. Mercury is included as one of the principal pollutants in these legislative proposals. All legislative proposals under consideration would void many existing Clean Air Act requirements including the Section 112 regulations for electric utilities. We are concerned that these pending federal actions will not provide for adequate mercury emission reductions regionally and nationally. In addition, the schedules for achieving reductions under consideration in both actions are not appropriate for Wisconsin's electric utility system. Below is a summary of the concerns we have about each of these pending actions.

Utility MACT Regulation – This is a federal regulation required in the Clean Air Act that would establish mercury control technology requirements for coal and oil fired electric utility boilers under a court-ordered schedule. The USEPA will have difficulty meeting this schedule because it is a very contentious rulemaking. At a minimum this standard will be delayed beyond the current court-ordered dates for regulation adoption (2004) and compliance (2007). This requirement is also in jeopardy of being eliminated altogether by recently introduced multi-pollutant legislation like the President's Clear Skies proposal. Once a regulation is proposed court challenges from numerous interested parties are likely which would cause further implementation delays. We believe that state required installation of mercury control equipment for the states' electric utility industry should be given a schedule longer than the three years allowed in this requirement to achieve significant mercury reductions and avoid any reliability complications.

Clear Skies – Clear Skies is one of several multi-pollutant proposals being introduced as federal legislation. The goal of Clear Skies is to establish reduction requirements for significant air pollutants from fossil fuel combustion at power plants that would replace the existing pollutant-specific approach in federal law and regulation. There is debate over what pollutants are significant. This is a proposal aimed at consolidating electric utility pollution control responsibilities that does includes a schedule for mercury reductions that are not significant until 2018 and gives opportunity to extend these reductions for years beyond 2018 with allowance trading. Electric utilities believe they can plan more effectively to meet requirements at lower costs because reduction requirements can be considered as a whole, not piecemeal. In exchange for a long-term reduction commitment, many current requirements in the Clean Air Act that apply to utilities would be eliminated. This federal action is also very contentious with three different legislative proposals being debated. Each has a different reduction level and schedule for mercury.

Our Wisconsin electric utilities should be commended for their commitment to reduce mercury emissions from their coal-fired boilers and acceptance of state regulation. However, we believe state mercury regulations must go beyond an initial first step to be constructive on a national level by defining the extent that mercury emissions can be reduced by our major utilities and outlining a rational schedule for those reductions.

C. Periodic Rule Evaluations

ISSUE: What should the frequency and content of the rule evaluation reports to the Natural Resources Board be?

The proposed rules require a report to the Board at least every 18 months that evaluates the feasibility of achieving reduction requirements considering future scientific and technology developments. These reports may also contain recommendations for rule revisions or other actions. Comments were received that this evaluation lacked a specific report to the Board when a federal action is taken like the promulgation of a regulation or enactment of a law that affects sources covered by state mercury rules. This specific report would be in addition to the periodic reports to the Natural Resources Board.

SELECT COMMENTS:

"DNR's proposal to evaluate the impact of federal MACT standards on state requirements and make necessary adjustments does not adequately address the need to reconcile state rules with federal standards. A more definitive approach is to move forward with implementing a reasonable first rule phase, then condition the second phase of the rule on the outcome of the federal MACT standard. This would include an abeyance of the second phase of the state rule if it were inconsistent or more stringent than the federal program." – WE Energies

RESPONSE: A provision has been added that will require staff to provide the Board a reconciliation report within six months of the promulgation of a federal MACT regulation or upon enactment of a federal law that would require mercury reductions from electric utility boilers in the state. The requirement for a reconciliation report is in addition to periodic reports to the Board that would comprehensively evaluate science and technology related to mercury reduction and control.

D. Effect on Electric Reliability

ISSUE: Are the variance procedures adequate to safeguard electric reliability?

There is concern that the variance provisions in the proposed rules are not appropriate for addressing short-term situations that may require a major utility to operate out of compliance with a mercury limitation in order to meet demand because of a circumstance beyond their control.

SELECT COMMENTS:

"Although the variance provision in the proposed rules provides some relief for extraordinary circumstances, the provisions in the section gives little comfort to a source in the event that the equipment fails to perform as DNR has projected." – Wisconsin Public Service Corporation

"The rule provides a variance from the reduction requirements for utilities, but it does not include a variance provision for sources subject to the mass cap requirement. A variance should be allowed for mass cap facilities." – Wisconsin Paper Council

"Another concern involves situations where the achieved emissions reductions cannot be maintained due to system failures. For example, if a large natural gas-fired unit or a coal-fired unit with mercury controls fails, the system-wide mercury emissions may exceed an emission limit, and a resulting unit shutdown could jeopardize meeting electric demand. The proposed rule contains language that allows the DNR to waive the standards upon a specific showing by a plant operator. However, this language does not provide adequate assurance of protection from an unanticipated or an after-the-fact determination of an exceedance of mercury emissions standards due to equipment failures." – Alliant Energy

RESPONSE: The variance provisions in the proposed rules have been revised to distinguish inability to meet reduction requirements based on short-term electric reliability needs from significant barriers that

would prevent a major utility from implementing a plan to meet reduction requirements in the rules. To address concerns regarding short-term electric reliability, a specific section has been added that provides opportunities for major utilities to request a waiver from meeting an annual mercury reduction requirement due to an operational event beyond the control of a major utility. This waiver is proposed because the proposed variance provisions were not a good mechanism for addressing short-term electric reliability problems. The Public Service Commission would be consulted on each waiver request.

The rules proposed for adoption include an extended schedule for achievement of mercury reductions to provide major utilities the necessary time to plan, design and install mercury control technology during scheduled maintenance periods. The schedule length was selected specifically to avoid any threat to electric reliability. However, it is also recognized that an existing facility may encounter difficulty in installing equipment or making other changes to meet a new emission limitation. Therefore, the proposed rules still provide an opportunity for a variance that could establish an alternative schedule or reduction level or both for those situations where technological infeasibility or economic hardship prevent a major utility from implementing a plan to meet the proposed reduction requirements.

The requirement for major sources to cap their mercury emissions has been removed from these rules. Therefore, there is not a need at this time to consider a variance provision beyond the one proposed for the major utilities.

E. Emission Caps

ISSUE: Should major industrial sources have requirements in the proposed rules that place a cap on their annual mercury emissions?

Emission caps for all facilities emitting over 10 pounds annually were included in the proposed rules as a necessary foundation for a viable trading program. The 10 pound facility threshold is significant because it includes 25 facilities that were responsible for greater than 90% of the mercury emissions reported to the department in 2001. In addition to supporting a trading program, emission caps and offset provisions for new sources were included in the proposed rules to ensure that mercury emissions in Wisconsin would not increase.

There is strong opposition from industry stakeholders to the emission cap requirement in the proposed rules because of the concern that it would in effect limit production capability. Some stakeholders are doubtful that industrial sources can provide sufficient emission reduction credits to support the emissions offset requirement for new sources. Therefore, they believe there is limited value in requiring a cap on mercury emissions from industrial sources. Other stakeholders support establishing an emission cap on significant industrial sources to ensure that this sector does not increase their mercury emissions.

SELECT COMMENTS:

"A cap on mercury emissions from coal-fired boilers would effectively be a cap on all emissions – a cap on economic growth." – Wisconsin Paper Council

"WMC objects to both the emission cap and emission offset requirements proposed for major stationary sources. The emission cap, likely to effect coal-fired industrial boilers, will in effect be a cap on productive capacity and it is also likely that emission offsets will not be available for companies to expand or locate in the state. WMC also believes that the 10-pound threshold is arbitrary, provides little environmental benefit and should be applied on a unit basis not a facility-wide basis." – Wisconsin Manufacturers and Commerce

"Wisconsin Energy does not believe that setting a cap on industrial sources will create a sufficient market to support the proposed offset provisions for new or expanded utility sources. Industrial sources that make operational or physical changes to reduce mercury emissions in order to voluntarily create offsets expose their facilitates to the risk of additional state and federal permitting review, and potential additional control requirements." – WE Energies

RESPONSE: We are eliminating the emission cap requirement for major stationary sources. Major utilities will still have an annual emission cap that would go into effect on January 1, 2007.

In the proposed rules major stationary sources, those with annual mercury emissions greater than 10 pounds, did not have specific reduction requirements. However, these facilities were required to establish an emission baseline, have an annual emissions cap, and could opt to voluntarily reduce mercury emissions to create reduction credits to use or trade to others to meet requirements in the rules. When the rules were being drafted the requirements for this set of facilities was in part based on mercury emissions information in the department's emission inventory. The inventory included emissions for industrial and small utility coal-fired boilers, waste incinerators, several salvage processes a coal-fired kiln, a wastewater treatment plant and a chlor-alkali plant.

Subsequently, additional analyses performed by many non-major utility facilities affected by these proposed regulations resulted in significant changes in that inventory. Using improved techniques, mercury emissions from industrial and non-major utility coal-fired boilers changed from an expected 500 pounds to 100 pounds per year. Therefore, we have changed our expectation that there is a sufficient emissions base available to support a viable trading program. In addition to a reduction in the inventory, we received public comment from several of these facilities that they were not in a position now or in the foreseeable future to create mercury emission reduction credits.

A positive development from the dialogue in the advisory committee on this issue was an interest in an energy efficiency improvement program for industrial and commercial combustion sources instead of an emission cap. Preliminary discussions have occurred with industry representatives on the elements of a voluntary program to reduce mercury emissions that would include an energy efficiency component.

Although the rules proposed for adoption do not require an emission cap for facilities, other than the major utilities, we do believe it is necessary to include uniform procedures for determining mercury emissions for all significant sources in these rules. In the event of significant increases in emissions from sources not subject to a cap, the Department will work with stakeholders to determine if additional requirements are needed.

F. Addressing Growth in Mercury Emissions

ISSUE: How should growth in mercury emissions be addressed in the proposed rules?

The proposed rules required that new or modified sources with mercury emissions of 10 pounds or more provide emission offsets at a ratio of 1.5 to 1.0 as a requirement to obtain a permit to construct.

The most significant concern expressed was the fear that there would not be enough emission reduction credits available to meet this requirement. Those opposed to new source emission offsets emphasized that under the federal hazardous air pollutant program new or modified commercial, industrial, and electric utility boilers must apply mercury control technology as a requirement to obtain a construction permit.

Others supported the proposed emission offset approach for new sources and suggested that it be applied upon rule promulgation instead of four years after the rule effective date.

SELECT COMMENTS:

"The very real potential exists that there simply will not be enough offsets available to permit these new sources." – Wisconsin Public Service Corporation

"In order to avoid the potential for new sources to set artificially high baseline levels while avoiding emission offset requirements, it is recommended that the rule require all new sources commencing construction or modification at any time after the effective date of the rule to obtain emission offsets." - Forest County Potawatomi Community

"Wisconsin Electric's existing units by themselves are incapable of producing sufficient offsets for any proposed new advanced coal units given the 90% control requirement applicable to both new and existing units. In addition, industrial sources are likely to be very reluctant to make operational or physical changes to reduce mercury emissions in order to voluntarily create offsets." – WE Energies

"The DNR rule bans construction of new coal-fired electrical plants unless the utility somehow finds offsets from other sources equal to 150 percent of the new plant's projected emissions. However, offsets will not be available for purchase because they will be needed to achieve the aggressive reduction mandates. This leaves nothing for new plants." – Wisconsin Manufacturers and Commerce

RESPONSE: The requirement to obtain emission offsets has been replaced by a requirement for new or modified sources to have their mercury emissions controlled by best available control technology. Projects that would result in new emissions of mercury, 10 pounds or greater, would be affected. If a new project is subject to a federal mercury requirement under Section 112 of the Clean Air Act it would be exempt from this requirement.

The lack of availability of mercury emission reduction credits is clearly a concern. Although at times in the future significant mercury emission reductions may be available to support an emission offset program, Wisconsin does not have a sufficient emissions inventory base to ensure a consistent pool of emission credits is available. A technology-based approach ensures that any new proposal involving mercury emissions will be effectively controlled, without the risk of establishing a requirement that cannot be sustained.

G. Mercury Reduction Requirements

ISSUE: What should the schedule and stringency of mercury emission reductions be for Wisconsin's four major electric utilities.

The rules proposed for public hearing required reduction of mercury emissions from an established baseline in three steps over a fifteen-year period. The reductions are at five-year intervals and don't commence until five years after promulgation. The first reduction in five years requires a 30% reduction, the second reduction in ten years requires a 50% reduction and the final reduction at fifteen years is 90%.

No agreement was reached among committee members on a schedule and amount of mercury emission reductions for major utilities in the proposed rules. Some committee members were firm in their support for a two-step reduction schedule of 10% in five years and 40% in ten years with a multi-pollutant reduction alternative. Other committee members were adamant about the proposed rules achieving a 90% mercury emission reduction from the major utilities as soon as possible. Yet another group of committee members supported a voluntary program and no regulatory requirements.

SELECT COMMENTS:

"Utilities have very long lead times for developing compliance plans and getting financial and regulatory approval for spending money on emission controls. Any installation of these controls also needs to be scheduled to coincide with planned maintenance outages." – Wisconsin Utilities Association

"The 90% reductions called for by the rule are impossible to comply with without shutting down coal plants, which will threaten reliability and dramatically increase utility bills". – Wisconsin Utilities Association

"The department must maintain an aggressive approach to reductions. It is reasonable to put the ultimate goal at 90% reduction by 2010, with interim goals and review along the way." – Sierra Club Midwest

"The 30% utility system reduction requirement would preclude optimized reductions in other emissions, specifically SO2. It would also require landfilling ash rather than beneficially re-using it." – WE Energies

"The rule at NR 446.06 requires reductions that are too stringent in too short of a timeframe given the current status of known technically feasible and cost-effective mercury control technologies. The merits of these reductions are highly questionable and fail to recognize coordination with Federal regulations for mercury control." – Alliant Energy

RESPONSE: The proposed rules have been changed to require major utilities to reduce their baseline mercury emissions in two-steps. An initial reduction of 40% is required beginning January 1, 2010. A final reduction of 80% from baseline emissions begins January 1, 2015. A multi-pollutant reduction option is also included in the revised rules. Under this option, owners and operators of major utilities may obtain relief from the initial reduction requirement of 40% upon acceptance of a multi-pollutant reduction proposal.

The baseline determination approach has changed significantly. In the rules proposed for hearing, the foundation for setting the baseline was a measurement of emissions at the exit of the stack after existing air pollution control equipment had achieved some reductions in mercury emissions. In place of this approach, the rules have been revised to establish a baseline dependent upon the mercury emissions released when coal is burned without considering mercury reductions achieved by any existing air pollution control equipment. This change addresses a significant objection made by the major utilities that the proposed rules did not recognize or account for the actions they have already taken to reduce their mercury emissions. Based on the air pollution control equipment the major utilities have operating today, 15% to 20% of the mercury from coal combustion is being captured. Thus to meet the initial mercury reduction of 40%, the four major utilities, on average, need to achieve an additional 20 to 25% mercury reduction by January 1, 2010. To meet the final reduction requirement of 80% by January 1, 2015, baseline emissions need to be reduced an additional 60 to 65%.

Because of this change in the methodology of baseline determination a direct comparison between the reduction levels in the rules proposed for hearing and the revised rules cannot be made. However, the end result is similar with mercury emissions from the existing coal-fired utility boilers being significantly reduced from present levels by 2015.

Extensive additional analysis was performed to evaluate the issues raised in comments on the mercury reduction levels and schedule (see Attachment B). As a result, the amount of mercury reductions and schedule for achieving those reductions has been revised. The issue that was of most concern to electric

utility stakeholders was their belief that the proposed 90% reduction from mercury air emissions would require a significant replacement of most existing coal-fired boilers with natural gas fired boilers. From an electric reliability perspective this wholesale move to natural gas was identified in comments to be very costly and risky. The proposal does not force utilities to switch to natural gas to meet mercury reduction requirements. The reductions proposed can be met by installation of controls on existing coal-fired units. Fuel switching is an option, not a mandated action.

The revised rules establish a final 80% reduction by January 1, 2015, based on a technical analysis that demonstrates that the application of the most promising mercury control technology for Wisconsin's major utilities can achieve an overall 86% reduction from a baseline based on mercury content in the coal. This level of mercury emission reductions is feasible without requiring an extensive fuel switch to natural gas. The schedule for achieving mercury reductions anticipates and minimizes threats to electric reliability. The following is a list and brief description of provisions in the proposed regulation that have been added or modified to support the revised mercury reduction levels and reduction schedule in the rules proposed for adoption.

- *Staged Installation Schedule* – There are thirteen large units, greater than 200 MW, operated by the four major utilities affected by the proposal. The schedule we are proposing does not require all these units to have control equipment installed at one time. We recognize that equipment installation must be staged to avoid disruption in electrical service. Thus the proposal has an initial reduction of 40% required by January 1, 2010, and a final reduction of 80% required by January 15, 2015.

- *Planning and Design Period* – The proposed rules do not require mercury emission reductions to commence until nearly seven years after promulgation. This time is deemed necessary for the refinement of mercury control technology and to provide major utilities with ample time to perform the planning and design necessary to meet requirements. This period also accommodates coordination of control equipment installation within and between major utilities.

- *Compliance Flexibility* – Each of the four major utilities is allowed to average their mercury emission reduction requirement across their entire system allowing flexibility to decide how the mercury reductions will be achieved. In addition, the four major utilities can enter into agreements with each other to exchange excess mercury reductions to achieve annual compliance with reduction requirements.

- *Multi-pollutant Approach* – The proposal allows relief from the initial reduction requirement if a major utility is interested in pursuing a multi-pollutant approach.

- *Electric Reliability Waiver* – It is recognized that unanticipated events beyond the control of a utility may result in mercury emissions above the proposed limitations. The rules now include a provision that would allow a waiver under certain circumstances. The Public Service Commission would be consulted as part of any waiver request.

- *Variance* – In addition to the waiver there is provision for a variance that could specify a different schedule or reduction level or both based on a showing of technological or economic infeasibility. A separate variance opportunity is available for both the initial and final reduction requirements. The Public Service commission would also be consulted as part of the variance review.

- *Periodic Evaluation of Requirements* – At two specific times a report to the Natural Resources Board is required that would allow for revision to mercury reduction requirements based on control technology development and other factors.

H. Trading

ISSUE: Should compliance with the proposed mercury rules include provision for emission reduction credits created from mercury product collection projects or pollution reduction projects?

The committee was not in agreement that trading of emission credits should be an option in the proposed rules. Some committee members were very reluctant to accept emission credit trading, with restrictions, other committee members believe that the compliance flexibility provided by a trading option is a necessary component of the proposed rules particularly because mercury controls are in the early stages of development. The emission credit provision is also viewed as a way to encourage mercury emission reductions from non-utility sources.

SELECT COMMENTS:

"Trading needs to be severely restricted or not allowed. A trading program allows a facility to reduce their pollution on paper but not from their smokestacks. Toxic hotspots, where more mercury pollution can occur, threaten the health of local residents and the environment. The department must establish that compliance alternatives involving trade can only be done between emission units at the same facility." – Sierra Club Midwest

"The Department has proposed that a major utility may only use certified emission reduction credits from a mercury-containing products reduction project to provide no more than 25% of the reductions required under proposed s. NR 446.06. Additionally, the Department has proposed that a major utility may only use certified emission reduction credits from a pollution reduction project performed by another person to provide no more than 25% of the reductions required under proposed s. NR 446.06. We strongly object to the Department's proposal to place these limits on these forms of emission reduction compliance alternatives. A pound of mercury reduced from any air emission source, or pound of mercury from any product which is collected and properly disposed of, should be valued on an equivalent basis for the purpose of satisfying any reduction requirement in mercury air emissions from a major utility. The Department must revise its rule proposal accordingly." – Dairyland Power Cooperative

We have serious concerns about the viability of such a program. In particular, a viable trading program requires a sufficient number of buyers and sellers. It is highly unlikely that this will occur in Wisconsin. Most likely, there will be one large seller of mercury emission credits and perhaps a few additional sellers of small amounts of credits. The potential number of buyers is unclear, but will be limited in two ways. First, section 112 does not allow the use of trading to comply with federal MACT standards. Second, we expect that most (possibly all) companies subject to reduction requirements will take the steps necessary to meet the requirements without the use of purchased credits (for reasons of economic security and compliance with MACT). Any credits generated by over-compliance will likely be retained as a compliance cushion and to accommodate future growth. Overall, there would probably be few sellers and few buyers. – Wisconsin Paper Council

Supports alternative compliance mechanisms including trading and other market-based mechanisms (including credits for early reduction) that allow affected sources to achieve reductions cost-effectively. Averaging and trading provisions are critical components of a phased reduction program because of the impossibility of achieving a uniform level of control at all plants. – WE Energies

RESPONSE: The trading provisions in the proposed rules have been substantially changed. The opportunity to create certified emission reduction credits through a *pollution reduction project* or *mercury-containing products reduction projects* has been removed. In the initial proposal certified

emission reductions could have been used by a major utility to meet a portion of their mercury reduction requirements or these credits could have been used to provide emission offsets when issuing permits to a new source. Under the changes that have been made major utilities will still be allowed to average their mercury emissions across their entire system to demonstrate compliance. Also, major utilities could enter into agreements with each other to use excess reductions to meet the proposed mercury reduction requirements. Therefore, the proposed rules will still have trading provisions to provide compliance flexibility and help lower compliance costs.

In consideration of public comments received additional analysis was performed to determine the viability of the trading provisions proposed. The rules proposed for public hearing incorporated two different trading program approaches:

- *Cap and Trade* – Defined set of participating sources that can freely trade among themselves as a compliance alternative to meet a cap covering all participants.

- *Open Market Trading* – Voluntary opportunity for all types of sources to provide emission credits.

The rules proposed for adoption retain the cap and trade program approach for the major utilities however, the open market trading provisions have been removed. In our additional analysis we considered criteria that the United States Environmental Protection Agency employs to evaluate trading programs. That criteria includes measures for trading program equity and integrity:

- Integrity – Are the reduction credits surplus, quantifiable, enforceable and permanent?

- Equity – A measure of whether the emission reductions offered for trade have the same environmental benefit as reductions required from the source.

Considering these criteria we found that emission reductions obtained from a *mercury-containing products reduction project* cannot be determined with any degree of certainty and therefore are not quantifiable and do not meet the integrity test. In addition, stack emission reductions and potential reductions from a mercury product collection program do not have the same environmental benefit, therefore there may not be equity between these reductions. Therefore the products reduction projects provisions have been removed from the proposal.

An additional equity issue relates to the difference in the precision and accuracy of measurements for a combustion source, like a coal-fired boiler, compared to measuring mercury emissions from a process source, like a chlor-alkali production plant. In the case of the coal-fired boiler mercury emissions can be determined through direct measurement in the stack. Mercury emissions from a chlor-alkali are indirectly determined by a material balance method that is less precise and accurate than a stack emission determination. Therefore in most cases we could not determine if mercury emission reductions from process sources are equivalent to reductions in mercury emissions from a combustion source. This lack of integrity and equity in the open market trading program initially proposed in the rules has caused us to strike these provisions.

We have also discovered that the amount of emission credits we expected to be created from industrial combustion sources is much less than anticipated. The removal of the requirement to have new or expanding sources obtain sufficient reduction credits to offset new mercury emissions is supported by this analysis.

The technical evaluation we have conducted (see Attachment B) demonstrates that the major utilities should be able to achieve the two-phase mercury emission reductions in this new two-step proposal without the need to rely on emission reduction credits created by sources in other sectors.

II. Comments on Alternatives Offered for Public Comment

When the Natural Resources Board authorized hearings on the proposed rules they also authorized that public comment be solicited for specific alternatives. These alternatives focused on the following critical policy questions that need to be addressed in the proposed rules:

- What level of mercury utility emission reductions should be required and on what schedule?
- How should new sources of mercury emissions be addressed?
- What are the appropriate intervals for evaluations of provisions in the rules and what issues should be addressed in those evaluations?

A. Mercury Reduction Program

The Board requested that these mercury rules should include a provision that specifies the percentage of mercury reductions required and a phased schedule for achieving those reductions. The rules proposed for public hearing required the reduction of mercury emissions from an established baseline in three steps over a fifteen-year period. The reductions are at five-year intervals and don't commence until five years after promulgation. The first step requires a 30% reduction, the second reduction in ten years is 50% and the final reduction required is 90%.

In addition to the schedule and amount of mercury reductions in the proposed rules the following alternatives were offered for public comment:

1. Require a two-step reduction schedule, 25% by 2006 and 90% by 2010. If trading is allowed, require 90% mercury reductions by 2008.
2. Expand reduction requirement to include all utilities and government owned boilers with more than 10 pounds of mercury emissions in one year including chlor-alkali plants, medical waste incinerators, municipal waste incinerators and other significant sources.
3. Include a provision for the virtual elimination of mercury 20 years after rule promulgation.
4. Require a two-step reduction schedule, 10% by 2007 and 40% by 2012.
5. Allow for a multi-pollutant reduction alternative that would allow a major utility the opportunity to propose a multi-pollutant reduction program instead of achieving the mercury reduction requirements in the rules. Mercury reductions would still need to be an element of the proposal, which would also require a commitment to provide other environmental benefits beyond existing laws and rules. The proposal would also need to include a schedule to accomplish the alternative program. The alternative program would be subject to a public hearing.
6. Do not have a regulatory program. Implement a voluntary program.

SELECT COMMENTS:

"We support a voluntary approach. We are willing to work with the Department to help develop a voluntary reduction strategy that will improve the quality of Wisconsin's waters, while avoiding the problems that we have identified." – Wisconsin Paper Council

"WMC supports the voluntary program option in the rule package sent to public hearing. WMC recommends such a program be based on the program run by the State of Minnesota and the Minnesota Pollution Control Agency (MPCA)." – Wisconsin Manufacturers and Commerce

"We propose a mandatory program which would require 10 and 40% reductions from utility sources over five and ten years, respectively. This program would not require emission offsets for new or modified sources, but would instead feature case-by-case mercury control requirement. The 10 and 40% reduction levels would constitute the base program. Additionally, a source could opt out of these reduction requirements in exchange for developing and reaching a binding agreement with the Department on a multi-emission program alternative. Mercury emission reductions would need to be an element of the multi-emission agreement." – WE Energies

"The department must maintain an aggressive approach to reductions. It is reasonable to put the ultimate goal at 90% reduction by 2010, with interim goals and review along the way." – Sierra Club Midwest

"The Citizens' Utility Board (CUB) registers its support for proposed AM-27-01, a rule to regulate air borne mercury emissions from fossil fuel powered electric generating facilities in Wisconsin. CUB recognizes the potential for adverse rate impacts as a result of this rule. However, given the severity of the adverse consequences to the general population as a result of exposure to air borne mercury pollution, we strongly support the proposed rule, which establishes a phased approach to reduce mercury emissions by 90% over current levels within fifteen years. We believe that to do anything less would constitute an irresponsible approach to protecting human health and the environment." – Citizens' Utility Board

"The DNR proposed rule requires utilities to reduce their emissions 90% in 15 years, which means by the year 2017 (as opposed to 2015). Federal, bipartisan bills are calling for 90% mercury reductions from power plants by 2007. At each of the reduction phases, there is an evaluation period, giving the DNR and utilities ample opportunity to adjust the reduction schedule if needed. The timeline for making 90% reductions should be amended to 2010. The flexibility in compliance options makes this reasonable" – Wisconsin's Environmental Decade

RESPONSE: In the rules proposed for adoption, we have included several of these alternatives and incorporated elements of several others. The rules now contain a multi-pollutant option and a two-phase mercury reduction schedule. The emission cap requirement for industry has been removed. We have had preliminary discussions with industrial representatives on the development of a voluntary mercury reduction program. Our technical analysis (see Attachment B) demonstrates that significant mercury emission reductions can be achieved by the four major utilities however, this cannot be accomplished if the schedule for equipment planning, design and installation is too rapid.

B. Provisions for New Mercury Sources

The rules proposed for hearing required that new or modified sources with mercury emissions of 10 pounds or more provide emission offsets at a ratio of 1.5 to 1.0 as a requirement to obtain a permit to construct. The following alternatives were offered for comment during public hearings:

1. More Stringent. Require mercury emission reductions equal to 150% of the annual mercury emission increase from any new source or modification of an existing source without a lower mercury emission threshold of 10 pounds.

2. Latest Available Control Technology. Instead of emission offsets establish a mercury control technology requirement for new sources and modifications of existing sources with substantial mercury emissions.

3. Latest Available Control Technology with Determination of Environmental Benefits. Require mercury control technology for new sources and modifications of existing sources with substantial mercury emissions only if a finding were made that there would be a benefit from the reductions that would be achieved.

RESPONSE: We carefully examined the emission-offset requirement for new sources and based on a number of factors we believe that this program cannot be sustained and should be removed from the rules. It is very likely that there may not be an adequate amount of acceptable emission reduction credits available to meet the offset requirement. Primarily this is because the state inventory of mercury emissions from industrial sources is less than anticipated. These industrial sources were targeted as likely participants in voluntary pollution reduction projects because of their potential to reduce their mercury emissions. A technology-based requirement is more appropriate. It meets the intention of the initial proposal to ensure that mercury emissions from new sources should be limited.

C. Periodic Evaluations of the Rules

The rules proposed for public hearing required a report to the Board every 18-months throughout the fifteen-year period of major utility mercury reductions. Specific alternatives were not developed for the public comment period.

RESPONSE: The revised rules include a specific provision that requires that the Board receive a reconciliation report within six months of a federal action that requires mercury emission reductions at major utilities. The frequency of periodic evaluations to the Board has been reduced in the revised rules. A report is now required by January 1, 2009, and an updated report is due by January 1, 2013. An evaluation report is scheduled to occur in advance of each mercury reduction requirement to provide an update on mercury science and technology as well as to recommend any needed revisions to the rules.

III. Legislative Council Clearinghouse Comments

The Legislative Council Rules Clearinghouse provided a number of comments on the proposed rules related to the style, form, and substance of the draft rule language.

The Department modified the draft rules to incorporate the suggested changes and to address the comments provided in the Clearinghouse report, with one exception. The rules clearinghouse had recommended that the department modify the definition of "allowable emissions" in s. NR 446.02(1) to delete a phrase that was considered to include substantive material. However, the definition of "allowable emissions" is consistent with how that term is defined in s. 285.01(7), Stats., including the phrase that was recommended for deletion. The department will retain the definition as proposed, consistent with its statutory counterpart.